

SPECIFICATION AMENDMENTS

On page 1, insert above line 1, insert--Priority Claim

—The present invention related is directed to a process to prepare base oils or the intermediate waxy raffinate product in a high yield from a Fischer-Tropsch synthesis product.—

On page 1, above line 1, insert--Field of the Invention--

On page 1, above line 5, insert--Background of the Invention--

Paragraph on line 5 of page 1 has been amended as follows:

— Such processes are known from WO-A-9941332, US-A-Pat No. 6080301, EP-A-0668342, US-A-Pat No. 6179994 or WO-A-02070629. These processes all comprise some kind of hydroisomerisation of the Fischer-Tropsch synthesis product followed by a dewaxing step of the higher boiling fraction obtained in said hydroisomerisation.—

Paragraph on line 24 of page 1, ending on line 7 of page 2, has been amended into two paragraphs as follows:

—Although such a process will yield excellent quality base oils there is room for improvement. Especially the It would be useful to improve the quality and the yield of the intermediate waxy Raffinate product, may be improved. — The present invention aims at providing such a process. Process to prepare a waxy Raffinate product by performing the following steps:

Summary of the Invention:

The present invention provides a process comprising:

- (a) subjecting a Fischer-Tropsch derived product having a weight ratio of compounds boiling above 540 °C and compounds boiling between 370 and 540 °C of greater than 2 to a hydroconversion step and
- (b) fractionating the effluent of step (a) to obtain products boiling in the fuels range and a waxy raffinate product boiling between 350 and 600 °C.—

Paragraph on line 18 of page 2, ending on line 4 of page 3 has been amended as follows:

– The Fischer-Tropsch derived product will comprise a Fischer-Tropsch synthesis product. With a Fischer-Tropsch synthesis product is meant the product directly obtained from a Fischer-Tropsch synthesis reaction, which product may optionally have been subjected to a distillation and/or hydrogenation step only. The Fischer-Tropsch synthesis product can ~~may~~ be obtained by well-known processes, for example the so-called commercial Sasol process, the Shell Middle Distillate Process or by the non-commercial Exxon process. These and other processes are for example described in more detail in EP-A-776959, EP-A-668342, US-A-Pat No. 4943672, US-A-Pat No. 5059299, WO-A-9934917 and WO-A-9920720. Typically these Fischer-Tropsch synthesis products will comprise hydrocarbons having 1 to 100 and even more than 100 carbon atoms. This hydrocarbon product will comprises normal paraffins, iso-paraffins, oxygenated products and unsaturated products. The feed to step (a) or any fractions obtained in step (a) may be hydrogenated in order to remove any oxygenates or unsaturated products.–

Paragraph on line 5 of page 3 has been amended as follows:

– The weight ratio of compounds boiling above 540 °C and compounds boiling between 370 and 540 °C in the feed to step (a) is greater than 2, preferably greater than 2.5, even more preferably greater than 3. The $T_{10\text{wt\%}}$ $T_{100\text{wt\%}}$ recovery point of the Fischer-Tropsch derived product is preferably below 400 °C. Such a feed may be prepared by separating from the Fischer-Tropsch synthesis product part or all of the paraffin fraction boiling between 370 and 540 °C and/or adding a Fischer-Tropsch derived fraction comprising compounds boiling above 540 °C to the Fischer-Tropsch synthesis product. With boiling predominately between or above a certain value is meant that at least 80 wt% of said fraction, preferably at least 90 wt% of said fractions boils between or above the cited value.–

Paragraph on line 20 of page 3 has been amended as follows:

– The separated paraffin fraction boiling between 370 and 540 °C may be advantageously be sold as a paraffin wax or used as feed to prepare a base oil by means of the dewaxing processes as described in for example EP-A-1204723. Before the dewaxing step the fraction may suitable suitably be subjected to a hydroisomerisation step such as described in or EP-A-776959. –

Paragraph on line 31 of page 3, ending on line 13 of page 4 has been amended as follows:

–The invention is also related to a process to prepare simultaneously prepare two or more grades of a paraffin wax having a congealing ranging from 30 to 120 °C and a waxy Raffinate product by a process comprising

- (i) subjecting part of the Fischer-Tropsch synthesis product to a hydrogenation step to remove oxygenates and olefins from the Fischer-Tropsch product;
- (ii) isolating from the hydrogenated Fischer-Tropsch product two or more wax grades, wherein at least one grade has a congealing point between 30 and 80 °C and at least one heavy grade having a congealing point of above 90 °C, preferably above 95 °C and
- (iii) mixing part or all of the heavy wax with another part of the Fischer-Tropsch synthesis product to obtain the Fischer-Tropsch, derived product for use in step (a).–

Paragraph on line 29 of page 4, ending on line 18 of page 5 has been amended as follows:

– In step (a) the Fischer-Tropsch derived feed is subjected to a hydroconversion step to yield the waxy Raffinate product. Step (a) is performed in the presence of hydrogen and a catalyst, which catalyst may can be chosen from those known to one skilled in the art as being suitable for this reaction. Catalysts for use in step (a) typically are amorphous catalysts comprising an acidic functionality and a hydrogenation/dehydrogenation functionality. Preferred acidic functionality's functionalities are refractory metal oxide carriers. Suitable carrier materials include silica, alumina, silica-alumina, zirconia, titania and mixtures thereof. Preferred carrier materials for inclusion in the catalyst for use in the process of this invention are silica, alumina and silica-alumina. A particularly preferred catalyst comprises platinum supported on a silica-alumina carrier. If desired, but generally not preferred because of environmental reasons, the acidity of the catalyst carrier may be enhanced by applying a halogen moiety, in particular fluorine or chlorine to the carrier. Examples of suitable hydrocracking/hydroisomerisation processes and suitable catalysts are described in WO-A-200014179, EP-A-532118 and the earlier referred to EP-A-776959.--

Paragraph on line 19 of page 5 has been amended as follows:

– Preferred hydrogenation/dehydrogenation functionality's functionalities are Group VIII non-noble metals, for example nickel as described in WO-A-0014179, US-A-Pat No. 5370788 or US-A-Pat No. 5378348 and more preferably Group VIII noble metals, for example palladium and most preferably platinum. The catalyst may comprise the

hydrogenation/dehydrogenation active component in an amount of from 0.005 to 5 parts by weight, preferably from 0.02 to 2 parts by weight, per 100 parts by weight of carrier material. A particularly preferred catalyst for use in the hydroconversion stage comprises platinum in an amount in the range of from 0.05 to 2 parts by weight, more preferably from 0.1 to 1 parts by weight, per 100 parts by weight of carrier material. The catalyst may also comprise a binder to enhance the strength of the catalyst. The binder may be non-acidic. Examples, include but are not limited to are clays and other binders known to one skilled in the art. Preferably the catalyst is substantially amorphous, meaning that substantially no crystalline phases are present in the catalyst. Thus catalysts comprising molecular sieves, such as zeolite beta are excluded because they generally give rise to excessive heavy ends cracking instead of the desired isomerisation reaction.--

Paragraph on line 31 of page 6, ending on line 12 of page 7 has been amended as follows:

-- The waxy Raffinate product may be subsequently be dewaxed to a base oil by means of generally known solvent or catalytic dewaxing processes as described in for example applicants EP-A-1366135 or EP-A-1366134. The Waxy Raffinate product may also be used in a traditional refinery environment to enhance the base oil production from a mineral oil feedstock. Because the Waxy Raffinate has a relatively low pour point of below 40 °C, preferably below 35 °C and even more preferably below 30 °C it is easily transported by for example ships to overseas refineries nearer the end customer. Suitable the Waxy Raffinate is added to a mineral oil based feed of a catalytic dewaxing unit in order to enhance for example the viscosity index of the resultant base oil.--

Paragraph on line 13 of page 7 has been amended as follows:

-- The invention will be illustrated by the below non-limiting Examples.

On page 10 above line 1, insert --We claim:--